

REPORT DOCUMENTATION PAGE

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FINAL TECHNICAL REPORT
(August 15, 1992-November 14, 1995)

Submitted to
Air Force Office of Scientific Research
Building 410, Bolling AFB, DC 20332

by

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in connection with

EPSCOR Grant AFOSR F49620-92-J-0464:

GRADUATE STUDIES IN AEROSPACE RELATED OPTIMIZATION

April 15, 1996

FINAL REPORT

During the first year of this EPSCOR grant on Graduate Studies In Aerospace Related Optimization, one graduate student was supported: James J. Revetta, Jr. Indeed, the grant originally provided for the support of this single individual.

Prior to enrolling in our graduate program, Mr. Revetta served as a captain in the USAF, at Scott AFB. In fact, he was instrumental in writing the AF simulation code, called MASS. That code contains no attempt at optimization.

Through an agreement with Scott AFB, a copy of the MASS code was transferred to our computers. The principal research activity of Mr. Revetta, together with several other graduate students, was to introduce optimized segments into that simulation code.

In the course of the first year, Mr. Revetta passed successfully both his written and oral doctoral examinations and was devoting his full time effort to the task described above.

During the second year of the EPSCOR grant on Graduate Studies In Aerospace Related Optimization, again the same graduate student was supported: James J. Revetta, Jr. Mr. Revetta was devoting his full time effort to the task of introducing optimized code into the MASS software package. However, several additional graduate students (not funded by this grant) also assisted him in this task. As a result, it is expected that, in addition to Mr. Revetta's doctoral dissertation, two or three other dissertations relating to the same topic, will result.

During the third year of this project certain changes occurred, because the original recipient of the benefits of this grant, James Revetta, did not utilize some of the money allocated for the last year of the grant. (Note that the research under this grant had to do with the MASS software project of HQ/AMC at Scott AFB.) Apparently because of the pressure and urgency of a similar project at Scott AFB (SAFMA), they hired Mr. Revetta on a full time basis, to work on that project there, utilizing the background he has gained during his studies here.

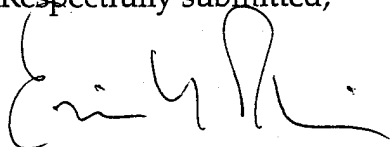
As a consequence of this, and as per the permission received from AFOSR, we began to utilize the remainder money of the grant for other USAF related expenses for students, software and hardware. In particular, four students were

working on a volunteer basis at Scott AFB. They returned to our campus shortly after the original expiration date of this grant, at the end of August. Thus, the left over funds were used to undertake some AFOSR related research projects with these students during the three months following.

As a final evaluation of the results of this EPSCOR grant, I would add that Mr. Revetta is now heading up a group at Scott AFB, the purpose of which is to continue to optimize the MASS code. One additional former doctoral student, Michael Meusey, is also working with him on a permanent basis. Furthermore, one of my current graduate students, Travis Cusick, is also assisting them on a very material, full time basis.

The conclusion then is that this grant provided the USAF with at least three doctoral level individuals, working on important USAF projects.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Ervin Y. Rodin', with a stylized flourish at the end.

Ervin Y. Rodin, P.I.